ECONOMETRICS III:

"Examining the Impact of Smoking Bans on Mortality Rates: A Difference-in-Differences Analysis Across Two U.S. Cities"

Null Hypothesis (H0): There is no significant difference in mortality rates between the two U.S. cities before and after the implementation of smoking bans.

Alternative Hypothesis (H1): There is a significant decrease in mortality rates in the city where the smoking ban was implemented compared to the city without a smoking ban.

MR 🡨--------- beta\_0 + beta\_1(SB) + e

Y 🡨------------ beta\_0 + beta\_1(X) + e

MR: Mortality Rate

SB: Smoking Bans

Expectation:

Gather Data

Clean it

Aggregate it

Apply a method [DiD]

Smoking Ban:

1. Google search for when each state implemented smoking ban
   1. Smoking bans by state
      1. <https://en.wikipedia.org/wiki/List_of_smoking_bans_in_the_United_States>

Checkpoint 4

Data + Identification + Meeting | Week 10 | 20 Points

Students must schedule a meeting with the instructor to discuss their data and identification. Meetings may be on Zoom or in person. Students are responsible for scheduling their meetings, which do not necessarily have to be during office hours. Meetings will likely be most effective before or during data collection and the formulation of their identification.

Students must have a clear, specific identification strategy and research design. This should feel similar to [an imagination exercise](https://alexcardazzi.github.io/econ400/imaginations.html), except a bit more grounded in reality.

Students must submit the data they’ll be using in their analysis. Data can either be links to online sources, .csv files, or a rendered .html file with summary statistics, etc. Obviously, the closer to the latter the better. In addition, data must be appropriate for the research question and causal inference strategy. For example, if a student is choosing to use Synthetic Control, they must have panel data with only one or two treated units. Students should anticipate their sample sizes being in the hundreds or thousands unless approved by the instructor.

Abstract

**Importance**  Smoking causes considerable noncommunicable diseases, perinatal morbidity, and mortality.

**Objective**  To investigate the associations of population-level tobacco-control policies with health outcomes.

**Data Sources**  PubMed, EMBASE, Web of Science, Cumulated Index to Nursing and Allied Health Literature, and EconLit were searched from inception to March 2021 (updated on 1 March 2022). References were manually searched.

**Study Selection**  Studies reporting on associations of population-level tobacco control policies with health-related outcomes were included. Data were analyzed from May to July 2022.

**Data Extraction and Synthesis**  Data were extracted by 1 investigator and cross-checked by a second investigator. Analyses were conducted using the Preferred Reporting Items for Systematic Reviews and Meta-analyses reporting guideline.

**Main Outcomes and Measures**  The primary outcomes were respiratory system disease (RSD), cardiovascular disease (CVD), cancer, mortality, hospitalization, and health care utilization. The secondary outcomes were adverse birth outcomes, such as low birth weight and preterm birth. Random-effects meta-analysis was used to estimate pooled odds ratios (ORs) and 95% CIs.

Checkpoint 5

Final Project

Final projects must be rendered .html files that are uploaded to an ePortfolio. The project’s outline should be as follows:

Introduction: Motivate and introduce your research question. Convince the reader that this topic/question is important and that they should care. What data do you use? What causal inference strategy do you use to address this question? What do you find? What can we learn from this?

Data: Where does your data come from? Why is this data good for answering your question? Be sure to create, and discuss, a summary statistics table and some plots.

Empirical Strategy: Outline your identification strategy including your causal inference method. Provide a discussion about why you are using the method you’re using. What are the strengths and weaknesses? What are your assumptions? Generate the results and interpret your findings. You might want to split this into two sections: Empirical Strategy and Results.

Conclusion: Remind the reader why your topic is important, what your research question is, what you do, and what you find. Be sure to include a discussion of the implications of your findings.

Bonus: Students can gain up to 10 bonus points for creating both a video abstract and a short, non-technical executive summary of their findings. In addition to the final project, these should also be uploaded to the ePortfolio.